

12

Notice of Allowability	Application No.	Applicant(s)	
	10/046,979	TOYOTA ET AL.	
	Examiner	Art Unit	
	Thoi V. Duong	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed June 01, 2006.
2. ☒ The allowed claim(s) ~~is~~ are 11-16 and 18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. This office action is in response to the Amendment filed June 01, 2006.

Accordingly, claims 1-10 and 17 were cancelled. Currently, claims 11-16 and 18 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In the title: change the title as "Image display and manufacturing method of the same including a thin film transistor and a storage capacitor."

Allowable Subject Matter

3. Claims 11-16 and 18 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claim 11, none of the prior art of record discloses, in combination with other limitations as claimed, an image display having a plurality of thin film transistors and a plurality of capacitors on a substrate, wherein

each of said thin film transistors has: a first insulating film formed between an island-shaped semiconductor layer and a gate electrode; an interlayer insulation film formed above said island-shaped semiconductor layer; and a source electrode and a

Art Unit: 2871

drain electrode come into contact with a source region and a drain region via an opening formed in said interlayer insulating film, and

each of said capacitors has: a second insulation film formed in contact with a storage electrode formed on the same layer as that of gate-lines, an upper surface of said interlayer insulation film, and a side surface of the opening formed in said interlayer insulation film.

The most relevant reference, USPN 5,814,529 to Zhang, fails to disclose or suggest a storage capacitor comprising a second insulation film formed in contact with the storage electrode, an upper surface of the interlayer insulation film, and side surfaces of the opening formed in said interlayer insulation film. As shown in Figs. 1A-1E, Zhang discloses an image display having a plurality of thin film transistors and a plurality of capacitors on a substrate 101, wherein

each of said thin film transistors has: a first insulating film 104 formed between an island-shaped semiconductor layer and a gate electrode 106; an interlayer insulation film 109 formed above said island-shaped semiconductor layer; and a source electrode 116 and a drain electrode 117 come into contact with a source region and a drain region via an openings 110, 111 formed in said interlayer insulating film 109, and

each of said capacitors 119 has: a second insulation film 108 formed in contact with a storage electrode 107 formed on the same layer as that of gate-lines and the gate electrode 106.

However, the second insulation film 108 does not contact an upper surface of said interlayer insulation film 109 as well as a side surface of the opening 112 formed in said interlayer insulation film 109.

Re claim 14, none of the prior art of record discloses, in combination with other limitations as claimed, a manufacturing method of an image display comprising a step of patterning the second insulation film, and etching only said second insulation film so as to be in contact only with an upper surface and side surfaces of the storage electrode and an upper surface of the first insulation film.

The most relevant reference, USPN 6,317,173 of Jung et al. (Jung), fails to disclose or suggest etching only the second insulation film so as to be in contact only with an upper surface and side surfaces of the storage electrode and an upper surface of the first insulation film. As shown in Figs. 52A-52K, Jung discloses a method of manufacturing a liquid crystal display comprising a gate electrode 410 and a storage electrode 420 formed on a first insulation film 300, and a second insulating film 50 formed on the storage electrode, wherein the second insulating film 50 is patterned and etched so as to become an insulating film 52 in contact only with an upper surface and side surfaces of said storage electrode; however, the insulation film 52 is not in contact with an upper surface of the first insulation film 300 (col. 22. lines 60 through col. 23, line 24).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

Art Unit: 2871

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

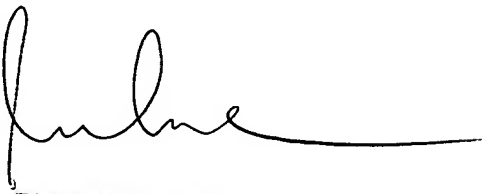
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi Duong



06/13/2006



**DUNG T. NGUYEN
PRIMARY EXAMINER**